ORDER NO.GAD8610462A2

Service Manual

Radio Cassette

RX-FM27L

(Black) (White) (Red)

Stereo Radio Cassette Recorder

- Please use this manual together with the service manual for model No. RX-FM27L order No. GAD8609437C2.
- This service manual indicates the main differences between; Original RX-FM27L (for [Z] mark area) and RX-FM27L [G] for F.R.Germany/[I] for Italy.

This is the Service Manual for the following areas.

[G] ...For F.R. Germany.

[I] ...For Italy

Color Variation

[G]	[I]
Black White	Black White Red

■ PARTS COMPARISON TABLE

NOTES:

1. Important safety notice.
   Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
2. The letter in round bracket in the Remarks column indicates the shipping destination.
   (G) ... For F.R.Germany, (I) ... For Italy
3. The letter in the circle in the Ref. No. column indicates the color of the product.
   Ⓚ ... Black Type, Ⓡ ... Red Type, Ⓦ ... White Type
4. The letter in square bracket after the part name indicates the color of the part.
   [K] ... Black, [R] ... Red, [H] ... Gray, [W] ... White, [S] ... Silver
5. [M] mark stands for that the parts are supplied in MESA.

Ref. No.	Description	Part Number		Remarks
		RX-FM27L [Z] (Original)	RX-FM27L [G] [I]	
Q101, 201	Transistor	2SA733P	2SA564Q	
Q111, 211	Transistor	2SC1328-S	2SC1327	
Q151, 251, 311, 333, 334	Transistor	2SC945Q	2SC945P1	
Q325	Transistor	2SC1685-Q	2SC1684R	
D2	Diode	————	MA856	Added
L5	Coil, FM OSC	RL04N184	RL04N198	
L6, 7	Bar Antenna, LW/MW [M]	RLF6W7-M	RLF6W11-0	
L12, 13 ⚠	Choke Coil	————	RLQZZ4701	Added
CT7	Trimmer Capacitor, SW OSC	RCVTZ20F	RCVTZ11F	
CT8	Trimmer Capacitor	————	RCVCTZ3210	Added
J1 ⚠	Jack, AC IN/S4	RJJ1A4ZD	RJJ1A4Z	
C2	Capacitor (50V, 22pF)	ECCT1H270KC	ECCT1H220KC	
C4	Capacitor (50V, 0.022μF)	ECKD1H103ZF	ECFT1E223MD	
C21	Capacitor (50V, 12pF)	ECCT1H150KC	ECCT1H120KC	
C27	Capacitor (50V, 2pF)	————	ECCT1H020C	Added
C101	Capacitor (25V, 0.047μF)	ECFVD104MD	ECFT1E473MD	
C102	Capacitor (25V, 0.033μF)	ECFV1E153MD	ECFT1E333MD	
C350	Capacitor (16V, 330μF)	ECEA1CU471E	ECEA1CU331	
C354	Capacitor (10V, 100μF)	————	ECEA1AU101B	Added

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	Ref. No.		Description		Part Number		Remarks
					RX-FM27L Z (Original)	RX-FM27L G I	
	R5		Resistor (100kΩ)		————	**ERD25TJ104**	**Added**
	R6		Resistor (1.8kΩ)		————	**ERD25TJ182**	**Added**
	R102, 202		Resistor (22kΩ)		ERD25TJ682	**ERD25TJ223**	
	R302		Resistor (1kΩ)		ERD25TJ332	**ERD25TJ102**	
	R341		Resistor (100Ω)		————	**ERD25TJ101**	**Added**
	R342		Resistor (3.9kΩ)		————	**ERD25TJ392**	**Added**
	R344		Resistor (2.2kΩ)		————	**ERD25TJ222**	**Added**
	K1		P.C.Board, W/Component	M	RUP2222ZA	**RUP2222ZA-2**	
	K2		Plug (4P), CP1		RJP4G10Z	**RJP4G18ZA**	
	K6	Ⓚ	Rear Cabinet Ass'y [K]	M	RYFXFM27LZKS	**RYFXFM27LGKS**	**(G) Only**
						RYFXFM27LiKS	**(I) Only**
	K6	Ⓡ	Rear Cabinet Ass'y [R]	M	RYFXFM27LZK2	————	**Deleted, (G) Only**
						RYFXFM27LiK2	**(I) Only**
	K6	Ⓦ	Rear Cabinet Ass'y [H]	M	RYFXFM27LZK7	**RYFXFM27LGK7**	**(G) Only**
						RYFXFM27LiK7	**(I) Only**
	K6-2		Name Plate	M	RGT1245YA	————	**Deleted, (G) Only**
						RGT1245XA-0	**(I) Only**
	K12		P.C.Board, Power	M	RUP2142ZA	**RUP2045XA-1**	
	K17	Ⓚ	Arm, Handle [K]	M	RKX347Z	**RKX347ZB-0**	
	K17	Ⓡ	Arm, Handle [R]	M	RKX347ZA2	————	**Deleted, (G) Only**
						RKX347ZB-2	**(I) Only**
	K17	Ⓦ	Arm, Handle [W]	M	RKX347ZA8	**RKX347ZB-8**	
	K18	Ⓚ	Handle [K]	M	RKX365ZA	**RKX365ZB-0**	
	K18	Ⓦ	Handle [W]	M	RKX365ZA1	**RKX365ZB-1**	
	K18	Ⓡ	Handle [R]	M	RKX365ZA2	————	**Deleted, (G) Only**
						RKX365ZB-2	**(I) Only**
	K20		Gear, Eject	M	RDG5782Y	**RDG5782YB**	
	K23		Button, Volume [S]	M	RBC992ZB	**RBC992ZC-0**	
	K26		Knob, FM/MODE [H]	M	RBD372ZA2	**RBD372ZB-2**	
	K27		Pointer, Dial [W]	M	RDP326ZA	**RBD326ZB-0**	
	K29	Ⓡ	Battery Cover [R]	M	RKK318ZA2	————	**Deleted, (G) Only**
						RKK318ZB-2	**(I) Only**
	K30		Chasis, EQ.	M	RUA721ZA	**RUA721ZB**	
	K35	Ⓚ	Angle, EQ. SW.[K]	M	RME431ZB	**RME431ZC-0**	
	K35	Ⓦ	Angle, EQ. SW.[W]	M	RME431ZB1	**RME431ZC-1**	
	K35	Ⓡ	Angle, EQ. SW. [R]	M	RME431ZB2	————	**Deleted, (G) Only**
						RME431ZC-2	**(I) Only**
	K38		Knob, Tuning [S]	M	RBN733ZC-5	**RBN733ZE-5**	
	K39		Button, EQ. [S]	M	RBC991YA	**RBC991YB**	
(*1)	K44	Ⓡ	Knob, Fine Tuning [R]	M	RBN762ZA2	————	**Deleted, (G) Only**
	K49	Ⓚ	Front Cabinet Ass'y [K]	M	RYMXFM27LZKS	**RYMXFM27LGKS**	
	K49	Ⓡ	Front Cabinet Ass'y [R]	M	RYMXFM27LZK2	————	**Deleted, (G) Only**
						RYMXFM27LiK2	**(I) Only**
	K49	Ⓦ	Front Cabinet Ass'y [W]	M	RYMXFM27LZK8	**RYMXFM27LGK8**	
(*2)	K53		Terminal (6P), CS4	M	SJT30543-V	**SJT30643-V**	
	K54		Socket (4P), CS1		————	**RJS4L4Z**	**Added**
	K55		Terminal, Contact		————	**RJT807Z**	**Added**

(*1) No changes have been made in parts for Italy.
(*2) This in a change from K8 (SJT30543-V). Refer to Cabinet Parts Location (page 5).

D

MEASUREMENTS AND ADJUSTMENTS

■ LW, MW and SW ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
	LW-RF ALIGNMENT						
(2)	LW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	136kHz	Tuning capacitor fully closed.	Output meter across voice coil.	L9 (LW OSC Coil)	Adjust for maximum output.
(3)	LW	〃	297kHz	Tuning capacitor fully open.	〃	CT5 (LW OSC Trimmer)	〃
	MW-RF ALIGNMENT						
(7)	MW	〃	1,650kHz	Tuning capacitor fully open.	〃	CT6 (MW OSC Trimmer)	〃

RX-FM27L [Z] (Original)

⬇

	LW-RF ALIGNMENT						
(2)	LW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	**138.5 kHz**	Tuning capacitor fully closed.	Output meter across voice coil.	L9 (LW OSC Coil)	Adjust for maximum output.
(3)	LW	〃	**293.5 kHz**	Tuning capacitor fully open.	〃	CT5 (LW OSC Trimmer)	〃
	MW-RF ALIGNMENT						
(7)	MW	〃	**1,639 kHz**	Tuning capacitor fully open.	〃	CT6 (MW OSC Trimmer)	〃

RX-FM27L [G] [I]

■ FM ALIGNMENT

	FM-RF ALIGNMENT						
(3)	FM	Connect to test point ▼1 through FM dummy antenna. Negative side to test point ▼2	86.2MHz	Variable capacitor fully closed.	Output meter across voice coil.	L5 (FM OSC Coil)	(*2) Adjust for maximum output.
(4)	FM	〃	109.2MHz	Variable capacitor fully open.	〃	CT2 (FM OSC Trimmer)	〃
(5)	FM	〃	106MHz	Tune to signal.	〃	CT1 (FM ANT Trimmer)	(*2) Adjust for maximum output. Repeat steps (3)~(5).
	(*2) Three output responses will be present; proper tuning is the center frequency.						

RX-FM27L [Z] (Original)

⬇

	FM-RF ALIGNMENT						
(3)	FM	Connect to test point ▼1 through FM dummy antenna. Negative side to test point ▼2	**87.35 MHz**	Variable capacitor fully closed.	Output meter across voice coil.	L5 (FM OSC Coil)	(*2) Adjust for maximum output.
(4)	FM	〃	**108.30 MHz**	Variable capacitor fully open.	〃	CT2 (FM OSC Trimmer)	〃
(5)	FM	〃	106MHz	Tune to signal.	〃	CT1 (FM ANT Trimmer)	(*2) Adjust for maximum output. Repeat steps (3)~(5).
	CT8 adjustment to center before FM-RF ALIGNMENT at the bottom of CT8 with a flat-head screwdriver. (*2) Three output responses will be present; proper tuning is the center frequency.						

RX-FM27L [G] [I]

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■ ALIGNMENT POINTS

* Please refer to Circuit Board and Wiring Connection Diagram which is located test point.

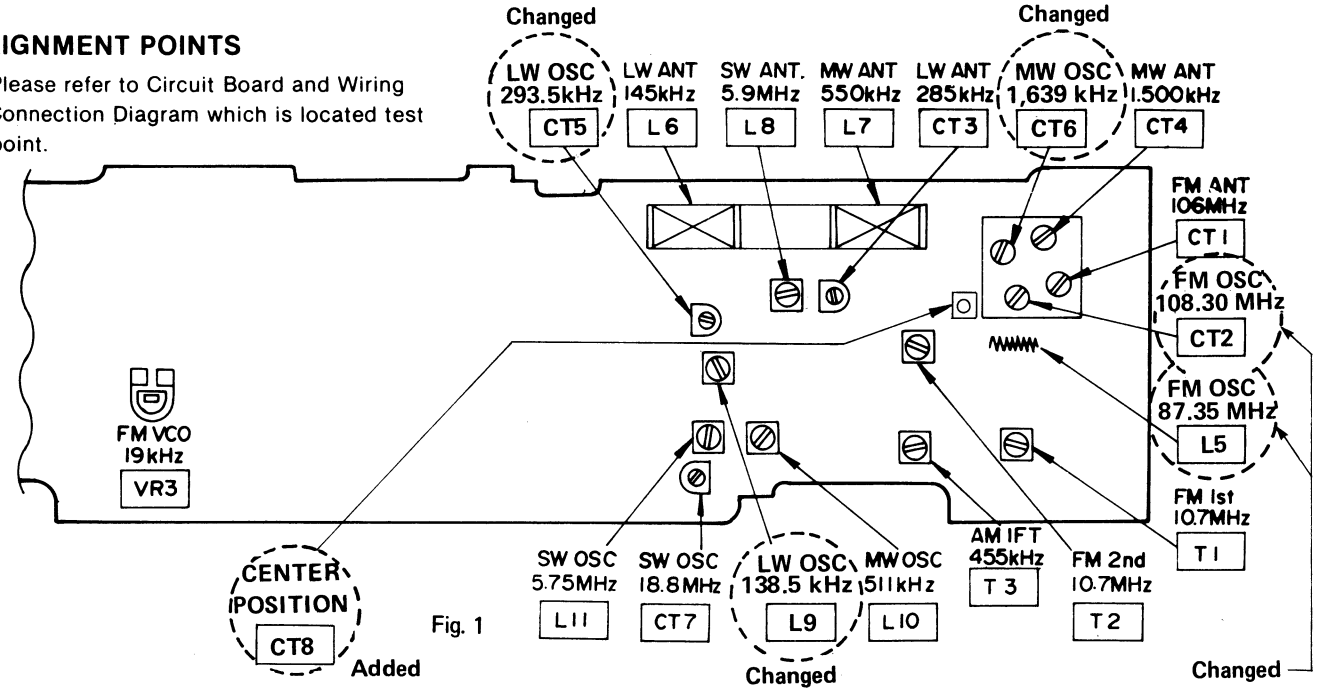
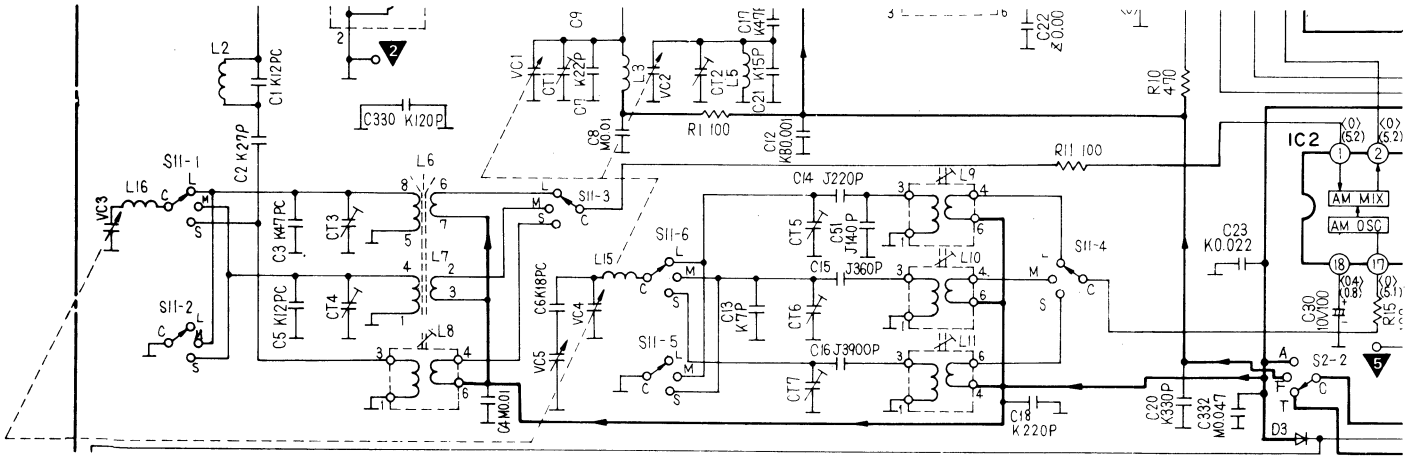
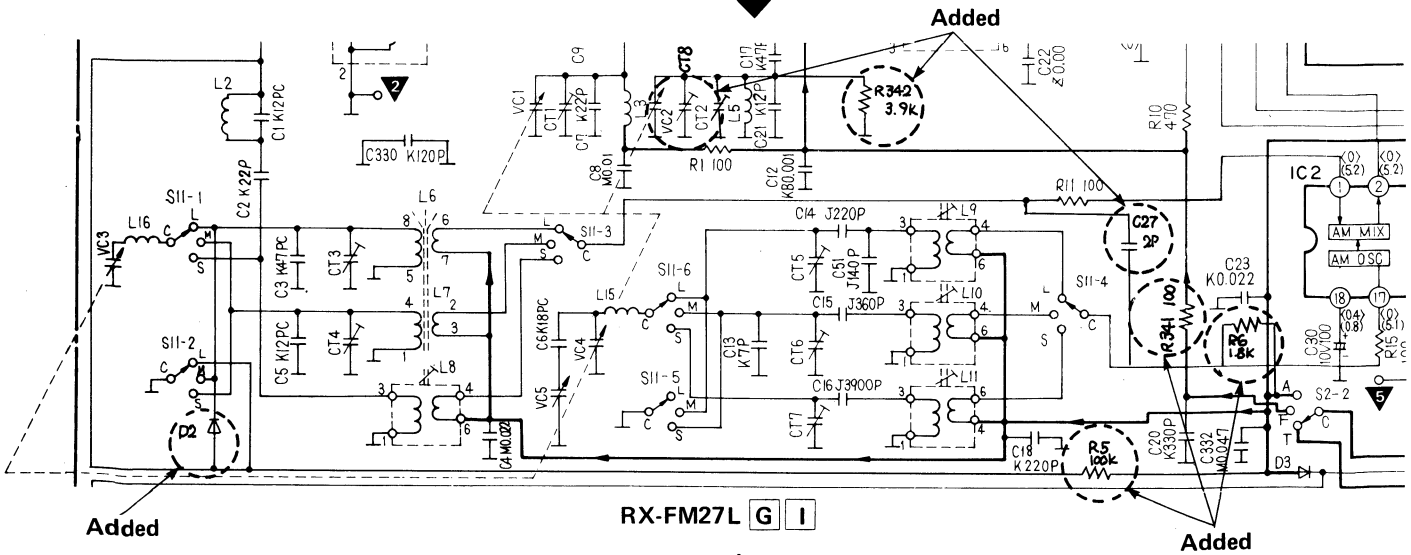


Fig. 1

SCHEMATIC DIAGRAM



RX-FM27L Z (Original)



RX-FM27L G I

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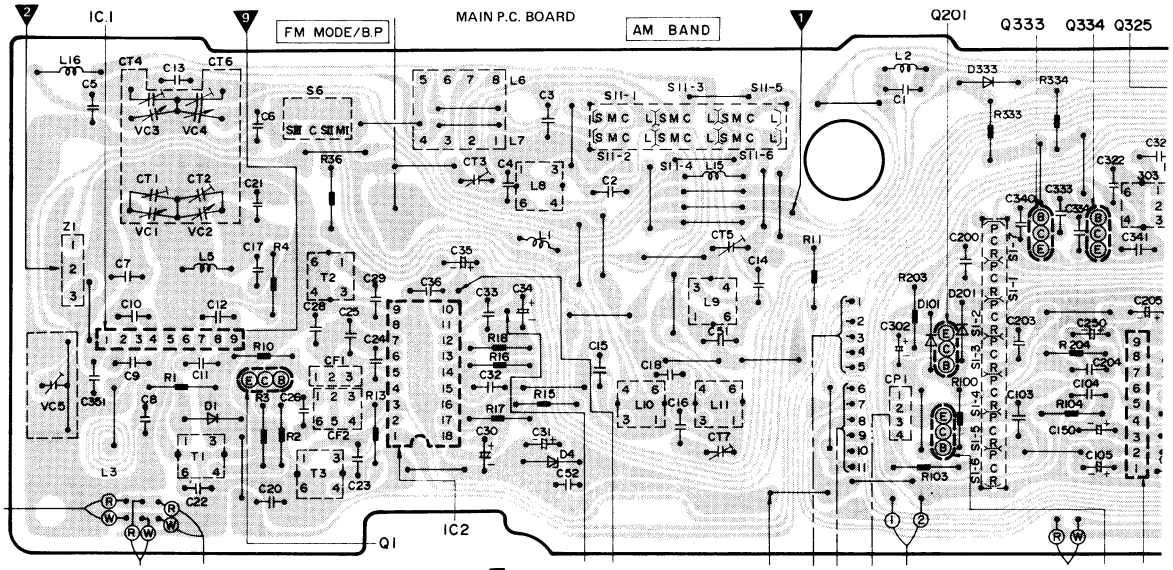
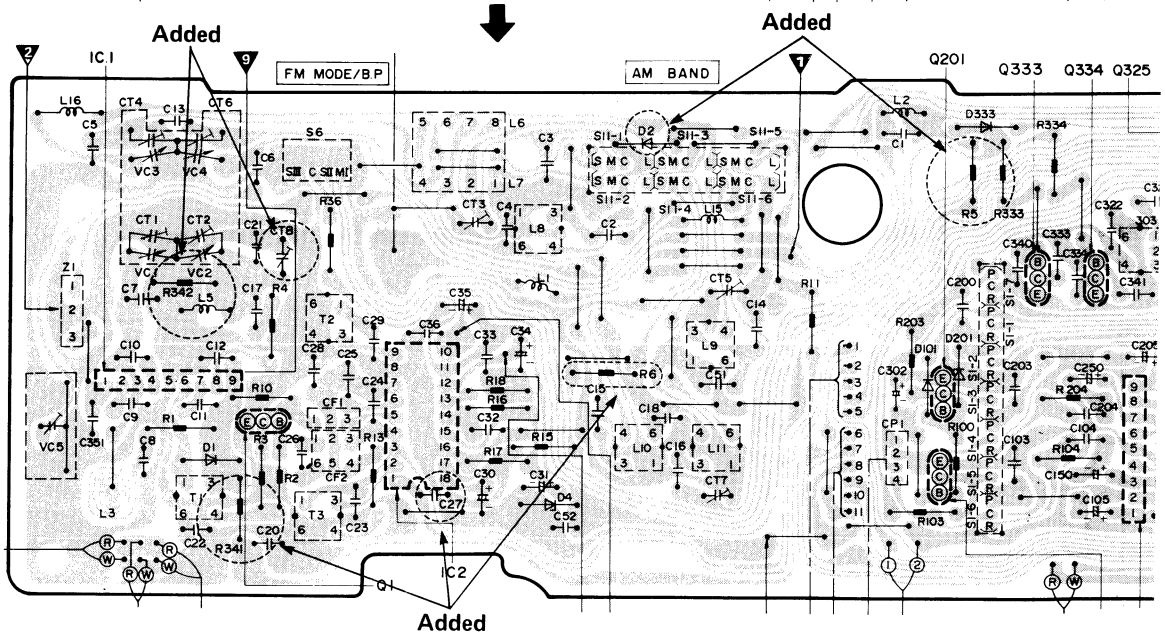
CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

MAIN CIRCUIT BOARD

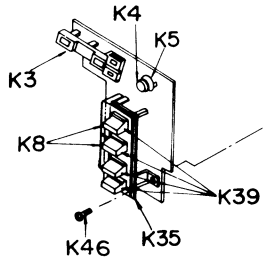
RX-FM27L [Z]
(Original)



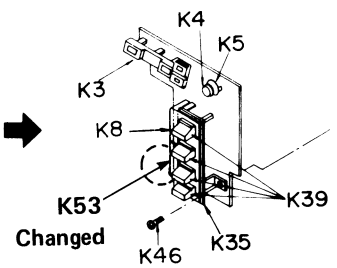
RX-FM27L [G] [I]



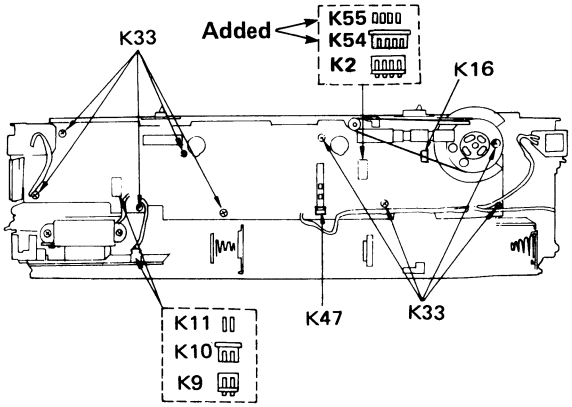
CABINET PARTS LOCATION



RX-FM27L [Z]
(Original)



RX-FM27L [G] [I]



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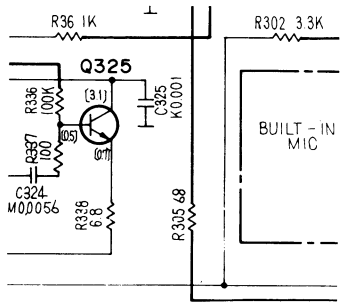
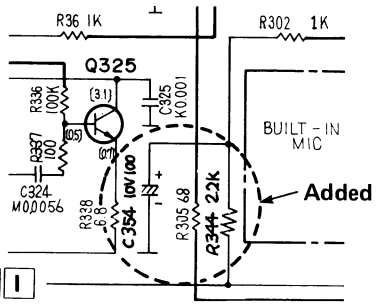
SCHEMATIC DIAGRAM

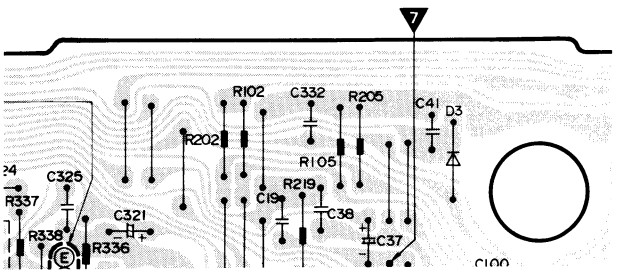


RX-FM27L [Z] (Original)

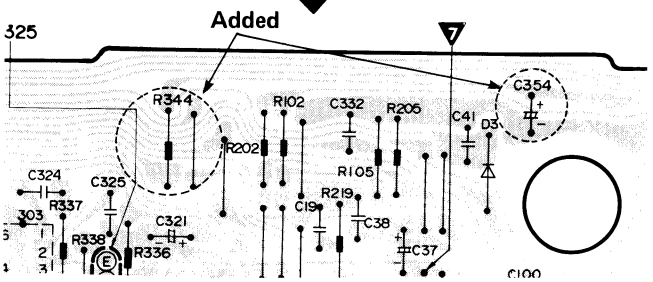


RX-FM27L [G] [I]

CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

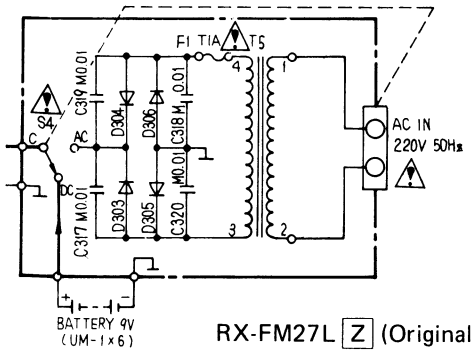


RX-FM27L [Z] (Original)

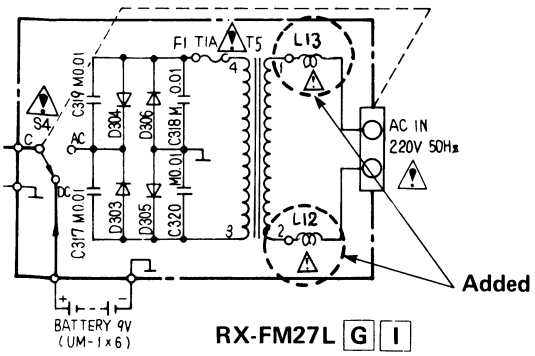


RX-FM27L [G] [I]

POWER SUPPLY CIRCUIT

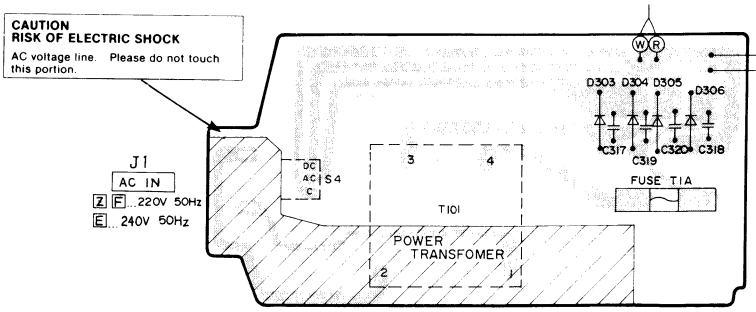


RX-FM27L [Z] (Original)

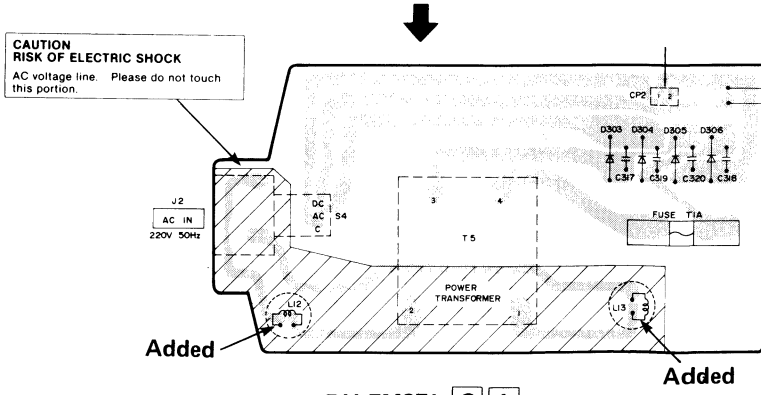


RX-FM27L [G] [I]

POWER SUPPLY CIRCUIT BOARD



RX-FM27L [Z] (Original)



RX-FM27L [G] [I]

ORDER NO. GAD8609437C2

Service Manual

Radio Cassette

RX-FM27L

(Black) (Red) (White)

FM-AM-FM Stereo Cassette Recorder

This is the Service Manual for the following areas.

[Z] ···For all European areas except [E] [F].

[E] ···For United Kingdom.

[F] ···For France.

RX-FM27MECHANISM SERIES

■ SPECIFICATIONS

General:

Power Requirement:	AC; [Z] [F] 220V, 50Hz
	[E] 240V, 50Hz
	Battery; 9V (Six "D" Size Flashlight Batteries)
	(Panasonic UM-1 or equlvalent)
Power Consumption:	16W (AC only)
Power Output:	7W (3.5W x 2) . . . MPO
	7W (3.5W x 2) . . . RMS (max.)
Speaker:	Woofer; 10cm, PM Dynamic Speaker (3Ω)
	Tweeter; 2cm, Ceramic Speaker (2kΩ)
Output:	Headphones; 32Ω, φ3.5
Dimensions:	457mm(W) x 137mm(H)x 122mm(D)
Weight:	2.3kg without batteries

Radio Section:

Radio Frequency Range:	FM; 87.5 ~ 108MHz
	LW; 148.5 ~ 285kHz (2020 ~ 1053m)
	MW; 520 ~ 1610kHz (577 ~ 186m)
	SW; 5.9 ~ 18MHz (50.8 ~ 16.7m)
Intermediate Frequency:	FM; 10.7MHz
	AM (LW/MW/SW); 455kHz
	(470kHz . . . [E] only)
Sensitivity:	FM; 4μV/50mW output
	(–3dB Limit Sens)
	LW; 126μV/m/50mW output
	MW; 100μV/m/50mW output
	SW; 5μV/50mW output

Tape Deck Section:

Frequency Response:	80 ~ 8,000Hz (with normal tape)
Recording System:	AC bias, Magnet erase
Tape Speed:	4.8cm/s
Track System:	4-track 2 channel stereo recording and playback

Design and specifications are subject to change without notice.

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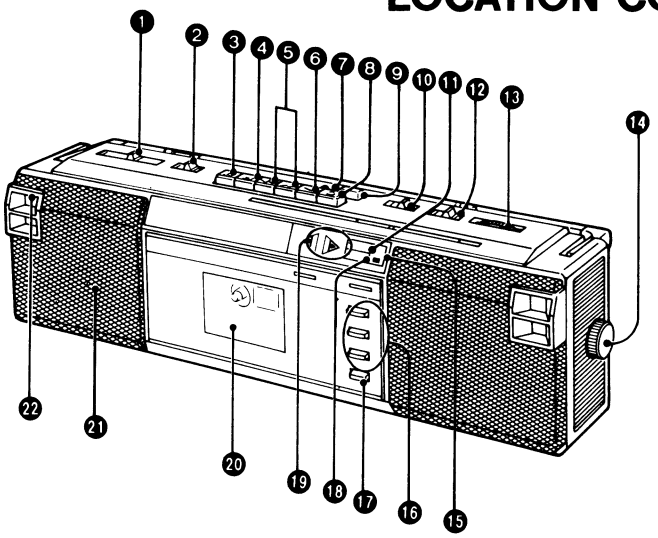
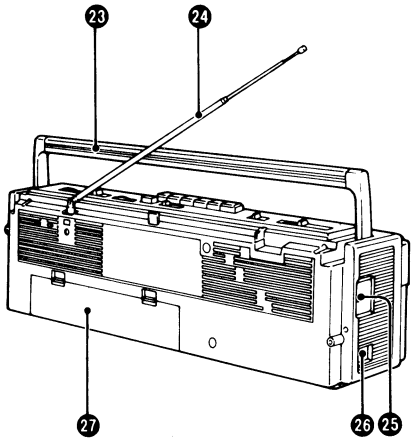
LOCATION CONTROLS





❶ **Volume Control (VOLUME)**
❷ **Function Selector (SELECTOR)**
❸ **Pause Button (❚❚ PAUSE)**
❹ **Stop/Eject Button (■ STOP/EJECT)**
❺ **Fast/Cue Buttons (◀◀ • ▶▶ FAST/CUE)**
❻ **Playback Button (◀ PLAY)**
❼ **Reverse Mode Selector (REVERSE MODE)**
❽ **Record Button (● RECORD)**
❾ **Direction Button (DIRECTION)**
❿ **AM Band Selector (AM BAND)**
⓫ **Operation/Battery Check Indicator (OPERATION/BATT)**
⓬ **FM Mode Selector/Beat Proof Switch (FM MODE/B.P)**
⓭ **Tuning Control (TUNING)**
⓮ **Fine Tuning Control (FINE TUNING)**
⓯ **Built-in Microphone (MIC)**
⓰ **Combination Equalizer Switches (EQUALIZER)**
⓱ **Ambience Switch (AMBIENCE)**
⓲ **FM Stereo Indicator (FM STEREO)**
⓳ **Direction Indicators (FWD • REV)**
⓴ **Cassette Compartment**
㉑ **Speakers (Woofer)** 10cm, 3Ω
㉒ **Speakers (Tweeter)** 2cm, 2kΩ
㉓ **Handle**
㉔ **Telescopic Antenna**
㉕ **Headphones Jack (PHONES)** 32Ω, ⌀3.5

When using the headphones, avoid listening to sound for a long period of time and avoid excessive volume levels, which may injure your ears. (Optional headphones; EAH-S10)

㉖ **AC Socket (AC IN ∿)**
㉗ **Battery Compartment**

DISASSEMBLY INSTRUCTIONS

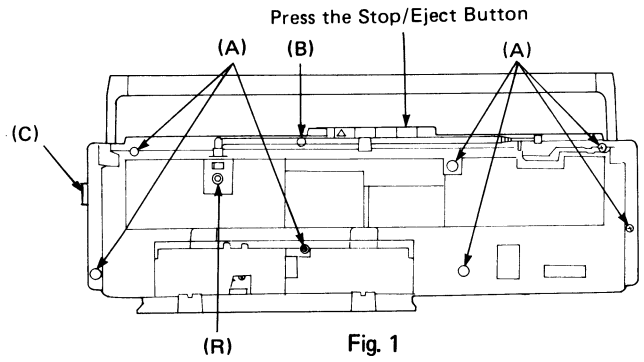


Fig. 1

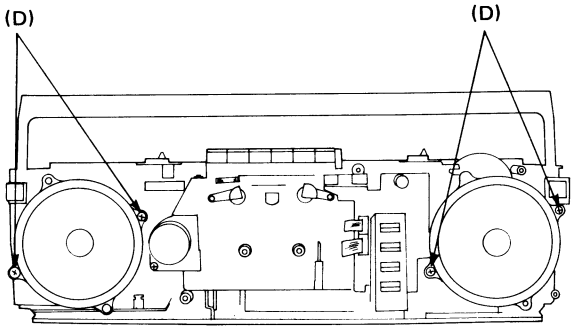


Fig. 2

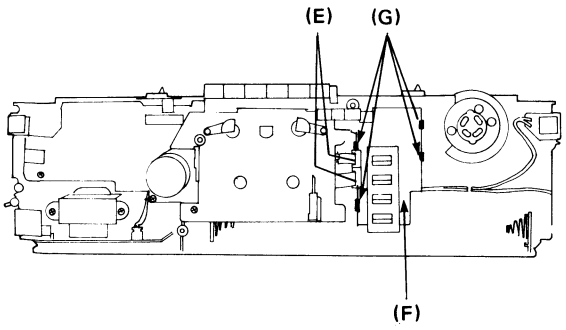


Fig. 3

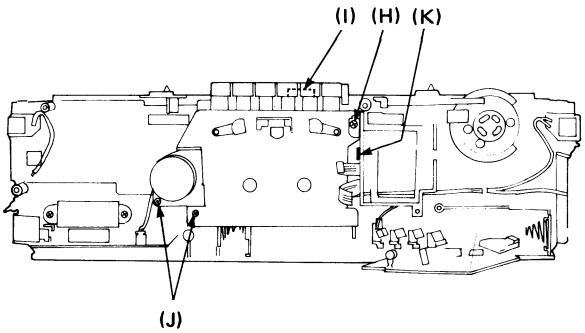


Fig. 4

D

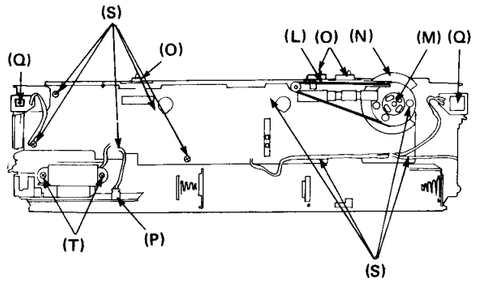


Fig. 5

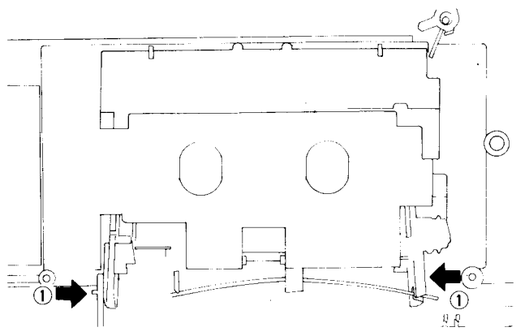


Fig. 6

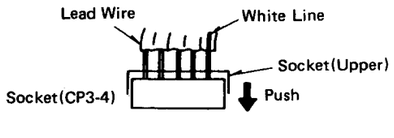


Fig.7

- **Precautions for Connecting and Disconnecting the CP3, CP4 (Socket) Lead Wires(See Fig.7)**
- Hold the bottom of the socket with one hand, and push down on the top of the socket with the other to disconnect the lead wires.
- To attach the socket, hold the bottom of the socket with one hand, and push down on the top of the socket with the other to insert the lead wires. (There is no support on the bottom of the P.C.Board, so do not push down too hard as this may damage the P.C.Board.) (After connecting the scoket, check to be sure that the lead wires are securely connected to the socket.) (Also be sure that the lead wires are connected in the right direction.)

Ref. No.	Shown in Fig. –.	To remove –.	Remove –.
1	1	Front Cabinet	Screw (3x35)mm ..... (A)x7
2			Screw (2 x 8)mm ..... (B)x1
3			Knob..... (C)x1
4			Press the stop/eject button
5	2	Speaker	Screw (3x12)mm ..... (D)x4
6	3	EQUALIZER Circuit Board	Socket ..... (E)x2
7			Screw (3x12)mm ..... (F)x1
8			Rib ..... (G)x4
9	4	EQUALIZER Chassis	Screw (3x12)mm ..... (H)x1
10	4	Mechanism	Knob ..... (I)x1
11			Screw (3x12)mm ..... (J)x2
12			Socket ..... (K)x1
13	5	Tuning Knob	Belt ..... (L)x1
14			Screw (2.6x8)mm ..... (M)x1
15			Tuning knob ..... (N)x1
16	5	Main Circuit Board	Knob ..... (O)x3
17			Socket ..... (P)x1
18			Tweeter ..... (Q)x2
19	1		Screw (3x25)mm ..... (R)x1
20	5		Screw (3x12)mm ..... (S)x9
21	5	Power Supply Circuit Board	Screw (3x12)mm ..... (T)x2
22	6	Cassette Holder	Push the boss in the direction of arrows ① to remove it.

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. Set volume control to maximum.
2. Set FM mode switch to stereo/II.
3. Set band switch to LW, MW, SW, FM.
4. Set equalizer switch to OFF(HIGH/LOW BOOST, HIGH CUT)
5. Set function selector to AM or FM.
6. Set fine tuning to center.
7. Set power source voltage to 9V DC.
8. Output of signal generator should be no higher than necessary to obtain an output reading.

■ LW, MW and SW ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR CONNECTIONS	SIGNAL GENERATOR or SWEEP GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
			AM-IF ALIGNMENT				
(1)	MW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455kHz (470kHz ...[E] only) 30% Mod. at 400Hz	Point of non-interference. (on/about 600kHz)	Output meter across voice coil.	T3 (AM IFT)	Adjust for maximum output.
			LW-RF ALIGNMENT				
(2)	LW	〃	136kHz	Tuning capacitor fully closed.	〃	L9 (LW OSC Coil)	〃
(3)	LW	〃	297kHz	Tuning capacitor fully open.	〃	CT5 (LW OSC Trimmer)	〃
(4)	LW	〃	145kHz	Tune to signal.	〃	(＊1) L6 (LW ANT Coil)	Adjust for maximum output. Adjust L6 by moving coil bobbin along ferrite core.
(5)	LW	〃	285kHz	〃	〃	CT3 (LW ANT Trimmer)	Adjust for maximum output. Repeat steps (2)~(5).
			MW-RF ALIGNMENT				
(6)	MW	〃	511kHz	Tuning capacitor fully closed.	〃	L10 (MW OSC Coil)	Adjust for maximum output.
(7)	MW	〃	1,650kHz	Tuning capacitor fully open.	〃	CT6 (MW OSC Trimmer)	〃
(8)	MW	〃	550kHz	Tune to signal.	〃	(＊1) L7 (MW ANT Coil)	Adjust for maximum output. Adjust L7 by moving coil bobbin along ferrite core.
(9)	MW	〃	1,500kHz	〃	〃	CT4 (MW ANT Trimmer)	Adjust for maximum output. Repeat steps (6)~(9).
	(＊1) Cement antenna bobbin with wax after completing alignment.						
			SW-RF ALIGNMENT				
(10)	SW	Connect to test point ▼1 through ceramic capacitor (10pF). Negative side to test point ▼2.	5.75MHz	Tuning capacitor fully closed.	〃	L11 (SW OSC Coil)	Adjust for maximum output.
(11)	SW		18.8MHz	Tuning capacitor fully open.	〃	CT7 (SW OSC Trimmer)	〃
(12)	SW		5.9MHz	Tune to signal.	〃	L8 (SW ANT Coil)	Adjust for maximum output. Repeat steps (10)~(12).

■ FM ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR CONNECTIONS	SIGNAL GENERATOR or SWEEP GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
			FM-IF ALIGNMENT				
(1)	FM	High side thru. 0.001μF to test point ▼9. Negative side to test point ▼2.	10.7MHz (SWP.)	Point of non-interference. (on/about 90MHz)	Connect vert. amp. of scope to test point ▼3. Negative side to test point ▼5.	T1 (FM 1st IFT)	Adjust for maximum amplitude. (Refer to fig. 2.)
(2)	FM	〃	〃	〃	〃	T2 (FM 2nd IFT)	Adjust for maximum amplitude. (Refer to fig. 3.)

▼ Be sure to fold at the (▼) mark so that mark is on the outside.

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. Set volume control to maximum.
2. Set FM mode switch to stereo/II.
3. Set band switch to LW, MW, SW, FM.
4. Set equalizer switch to OFF(HIGH/LOW BOOST, HIGH CUT)
5. Set function selector to AM or FM.
6. Set fine tuning to center.
7. Set power source voltage to 9V DC.
8. Output of signal generator should be no higher than necessary to obtain an output reading.

■ LW, MW and SW ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR CONNECTIONS	SIGNAL GENERATOR or SWEEP GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
				AM-IF ALIGNMENT			
(1)	MW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455kHz (470kHz ...[E] only) 30% Mod. at 400Hz	Point of non-interference. (on/ about 600kHz)	Output meter across voice coil.	T3 (AM IFT)	Adjust for maximum output.
				LW-RF ALIGNMENT			
(2)	LW	〃	136kHz	Tuning capacitor fully closed.	〃	L9 (LW OSC Coil)	〃
(3)	LW	〃	297kHz	Tuning capacitor fully open.	〃	CT5 (LW OSC Trimmer)	〃
(4)	LW	〃	145kHz	Tune to signal.	〃	(*1) L6 (LW ANT Coil)	Adjust for maximum output. Adjust L6 by moving coil bobbin along ferrite core.
(5)	LW	〃	285kHz	〃	〃	CT3 (LW ANT Trimmer)	Adjust for maximum output. Repeat steps (2)~(5).
				MW-RF ALIGNMENT			
(6)	MW	〃	511kHz	Tuning capacitor fully closed.	〃	L10 (MW OSC Coil)	Adjust for maximum output.
(7)	MW	〃	1,650kHz	Tuning capacitor fully open.	〃	CT6 (MW OSC Trimmer)	〃
(8)	MW	〃	550kHz	Tune to signal.	〃	(*1) L7 (MW ANT Coil)	Adjust for maximum output. Adjust L7 by moving coil bobbin along ferrite core.
(9)	MW	〃	1,500kHz	〃	〃	CT4 (MW ANT Trimmer)	Adjust for maximum output. Repeat steps (6)~(9).
	(*1) Cement antenna bobbin with wax after completing alignment.						
				SW-RF ALIGNMENT			
(10)	SW	Connect to test point ▼1 through ceramic capacitor (10pF). Negative side to test point ▼2.	5.75MHz	Tuning capacitor fully closed.	〃	L11 (SW OSC Coil)	Adjust for maximum output.
(11)	SW		18.8MHz	Tuning capacitor fully open.	〃	CT7 (SW OSC Trimmer)	〃
(12)	SW		5.9MHz	Tune to signal.	〃	L8 (SW ANT Coil)	Adjust for maximum output. Repeat steps (10)~(12).

■ FM ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR CONNECTIONS	SIGNAL GENERATOR or SWEEP GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
				FM-IF ALIGNMENT			
(1)	FM	High side thru. 0.001μF to test point ▼3. Negative side to test point ▼2.	10.7MHz (SWP.)	Point of non-interference. (on/ about 90MHz)	Connect vert. amp. of scope to test point ▼3. Negative side to test point ▼5.	T1 (FM 1st IFT)	Adjust for maximum amplitude. (Refer to fig. 2.)
(2)	FM	〃	〃	〃	〃	T2 (FM 2nd IFT)	Adjust for maximum amplitude. (Refer to fig. 3.)
(3)	FM	Connect to test point ▼1 through FM dummy antenna. Negative side to test point ▼2	86.2MHz	Variable capacitor fully closed.	Output meter across voice coil.	L5 (FM OSC Coil)	(*2) Adjust for maximum output.
(4)	FM		109.2MHz	Variable capacitor fully open.	〃	CT2 (FM OSC Trimmer)	〃
(5)	FM		106MHz	Tune to signal.	〃	CT1 (FM ANT Trimmer)	(*2) Adjust for maximum output. Repeat steps (3)~(5).
	(*2) Three output responses will be present; proper tuning is the center frequency.						

■ SEPARATION ALIGNMENT

ITEM	FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
Adjustment of pilot signal.	98MHz, 60dB Connect to test point ▼1 through FM dummy antenna. Negative side to test point ▼2.	▼6...(+) ▼5...(−)	VR3	19kHz	Adjust VR3, for 19kHz (±100Hz) reading on electronics counter.

■ TAPE ADJUSTMENT

ITEM	INPUT	MEASUREMENT POINT	SPECIFICATION	ADJUSTMENT POINT	REMARKS
Azimuth	QZZCFM (8kHz, −20dB)	Headphone Jack	Maximum output.	Azimuth screw	1. Adjust the FWD and REV outputs and inputs to their maximum values and lock the screw in place. 2. Refer to Fig. 4.
Tape Speed	QZZCWAT (3kHz)	〃	3000±90Hz	Motor Volume	Playback mode (Refer to Fig. 5)

■ ALIGNMENT POINTS

* Please refer to Circuit Board and Wiring Connection Diagram which is located test point.

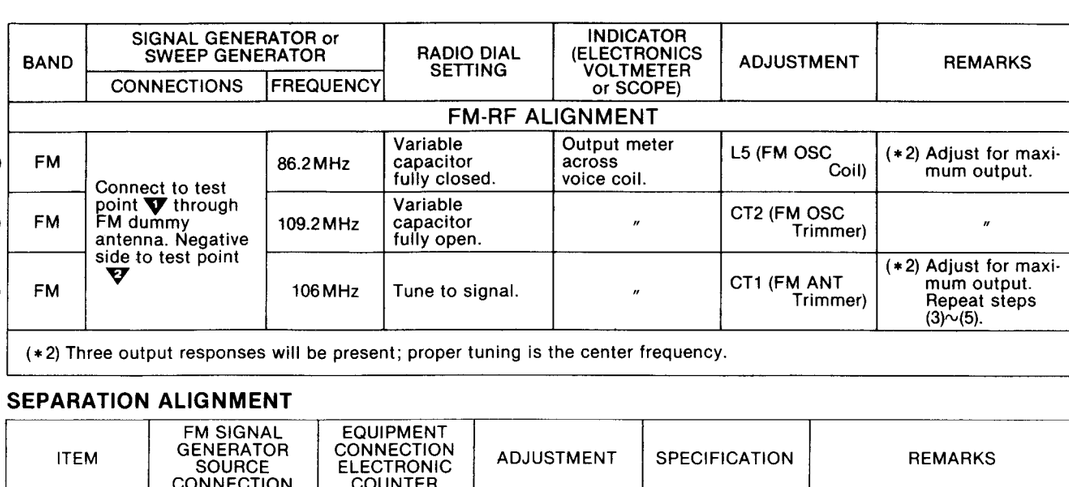


Fig. 1

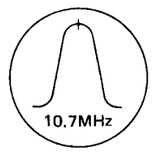


Fig. 2

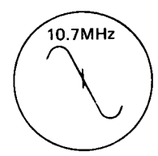


Fig. 3

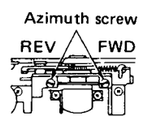


Fig. 4

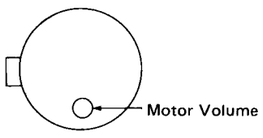
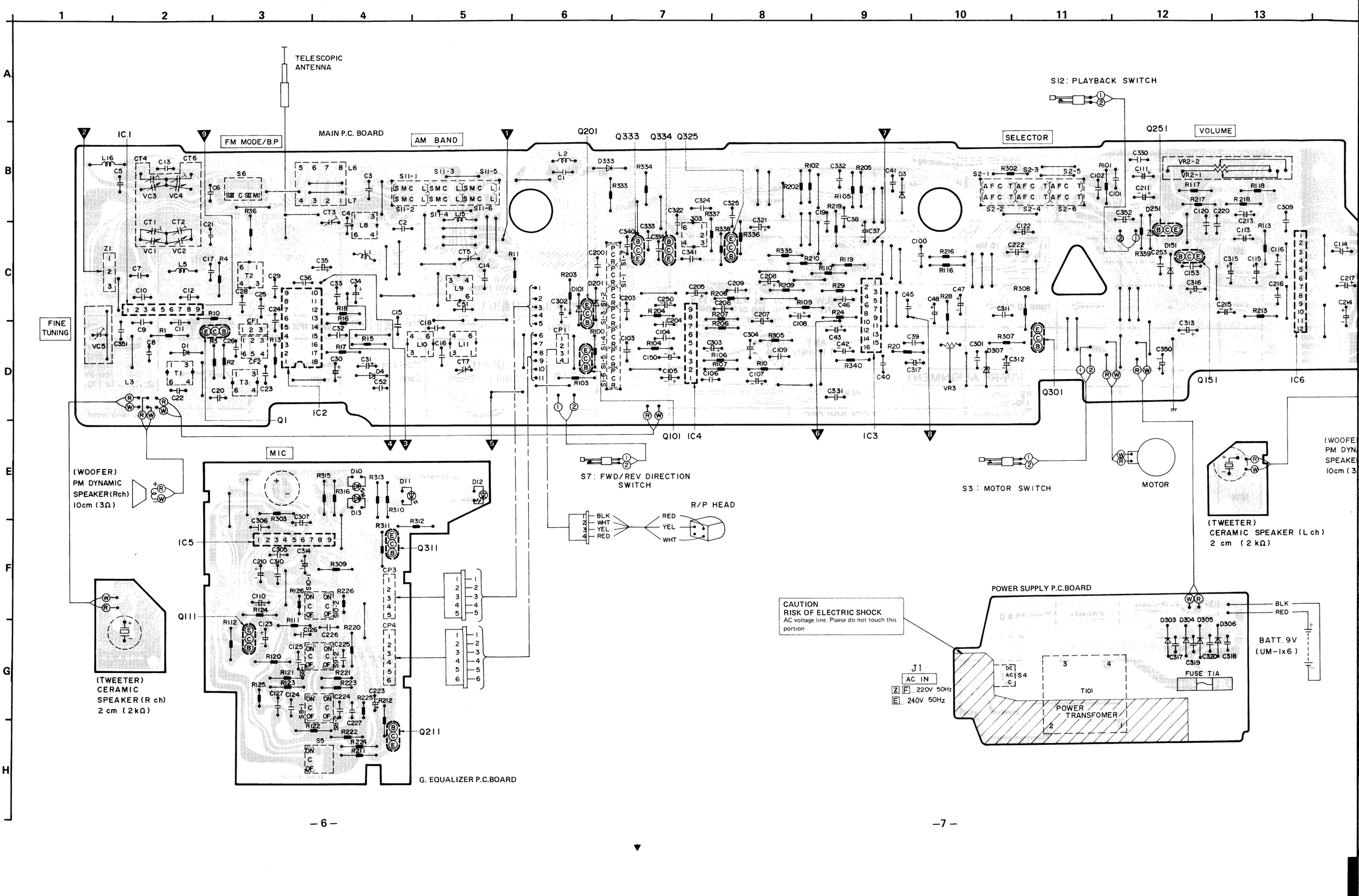


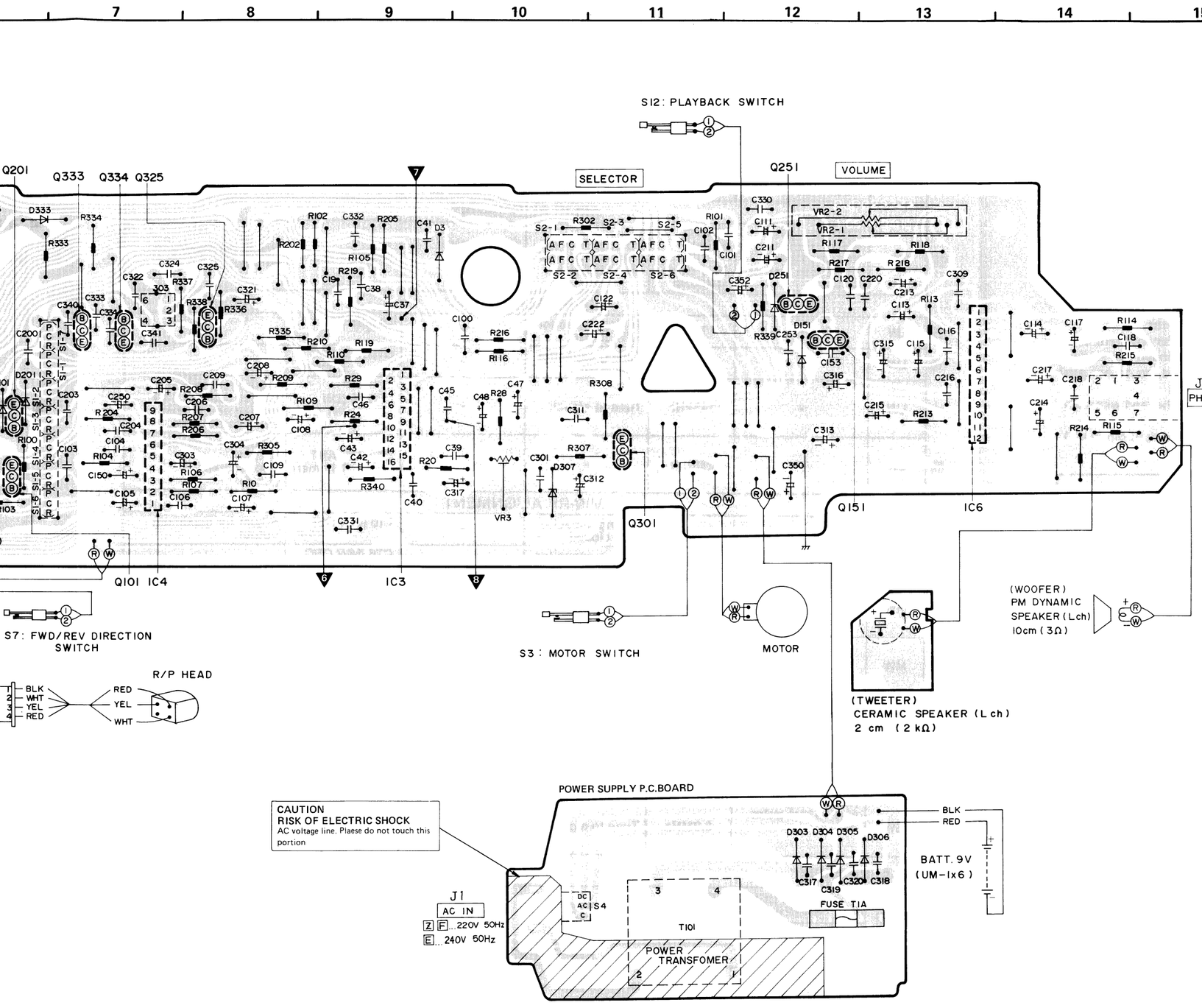
Fig. 5

▼ Be sure to fold at the (▼) mark so that mark is on the outside.

CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM



ND WIRING CONNECTION DIAGRAM

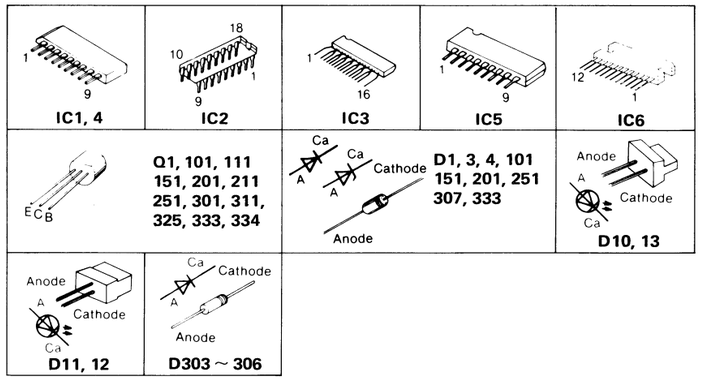


NOTES:

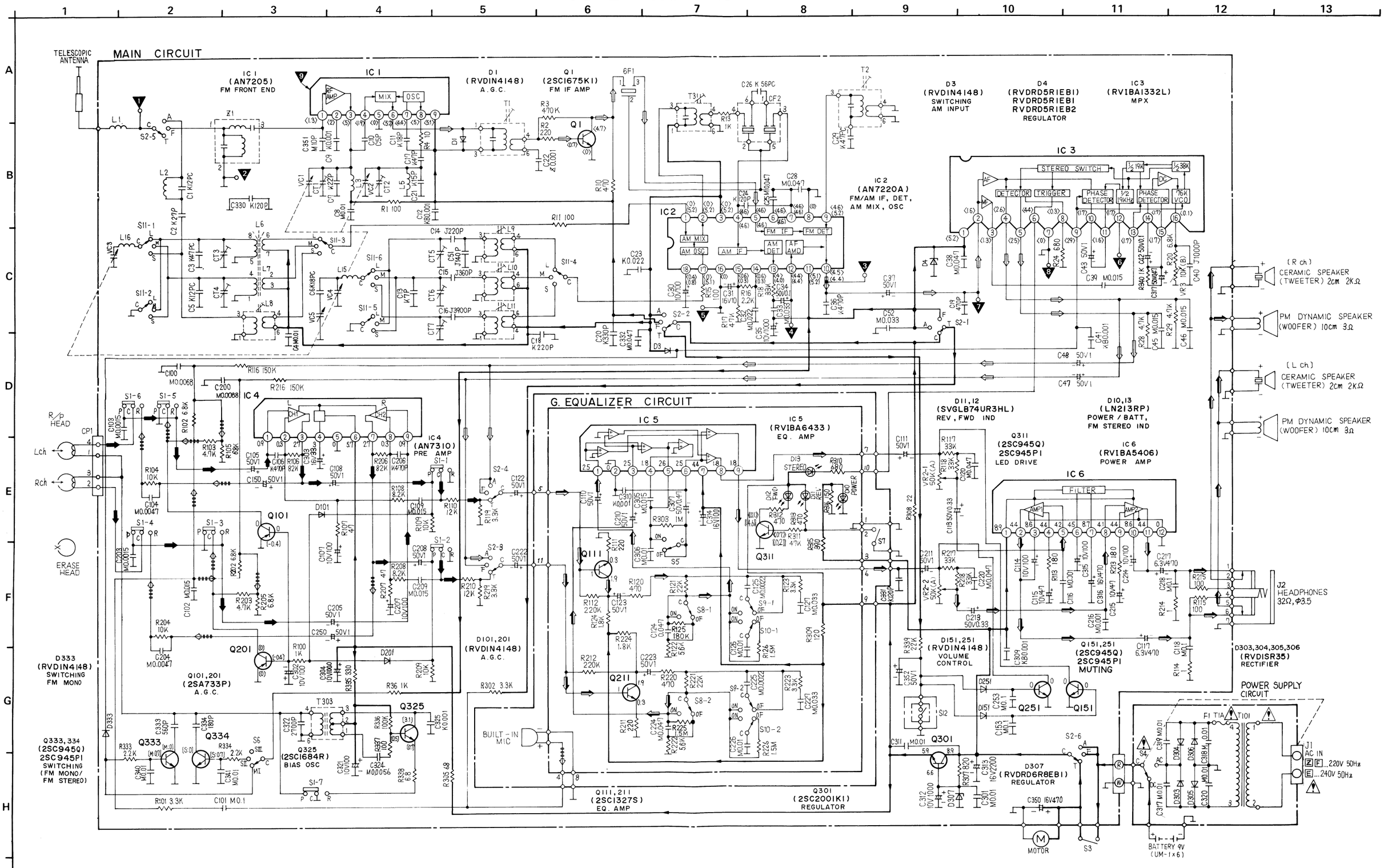
1. S1–1 ~ S1–7: Recording/Playback switch in "PLAYBACK" position. (R . . . RECORDING, P . . . PLAYBACK)
2. S2–1 ~ S2–6: Function selector switch in "TAPE/POWER OFF"position. (F . . . FM, A . . . AM, T . . . TAPE/POWER OFF)
3. S3: Motor switch in "OFF" position.
4. S4: AC/DC selector switch in "DC" position.
5. S5: Ambience switch in "OFF" position.
6. S6: FM mode/B.P switch in "MONO I" position. (MI . . . MONO/I, SII . . . STEREO/II, SIII . . . STERO/III)
7. S7: FWD/REV direction switch in "FWD" position.
8. S8: Low Boost switch in "OFF" position.
9. S9: High Boost switch in "OFF" position.
10. S10: High Cut switch in "OFF" position.
11. S11–1 ~ S11–6: AM band selector switch in "LW" position. (L . . . . LW, M . . . MW, S . . . SW)
12. S12: Playback switch in "OFF" position.
13. VR2–1, VR2–2 Volume control VR.
14. VR3: FM VCO adjustment VR.
15. DC voltage measurement are taken with electronics voltmeter from negative terminal of battery.
    No mark . . . Playback position, < > . . . FM position,
    ( ) . . . AM position, ≪ ≫ . . . FWD position, [[ ]] . . . REV position,
    [ ] . . . Recording (M. . . MONO, S . . . STEREO II) position.
16. Battery current : No signal 90mA
    Maximum output (radio) . . . 870mA
    Maximum output (tape). . . 780mA
17. Described in schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes.
    One type number is used for supply parts number and production parts number which they are identical.
    e.g. Q1
    2 SC2412NRTB, LNSTB ← Production parts number
    (2SC2412) ← Supply parts number
18. The supply parts number is described alone in the replacement parts list.
19. The mark (▼) shows test point. e. g. ▼ = test point 1.
20. Important safety notioce
    Components identified by ⚠ mark have special characteristics important for safety.
    When replacing any of these components, use only manufacturer's specified parts.

- **This schematic diagram may be modified at any time with the development of new technology.**

+B Voltage Line
Playback Signal
FM Signal
Record Signal
Main (Tape & Radio) Signal

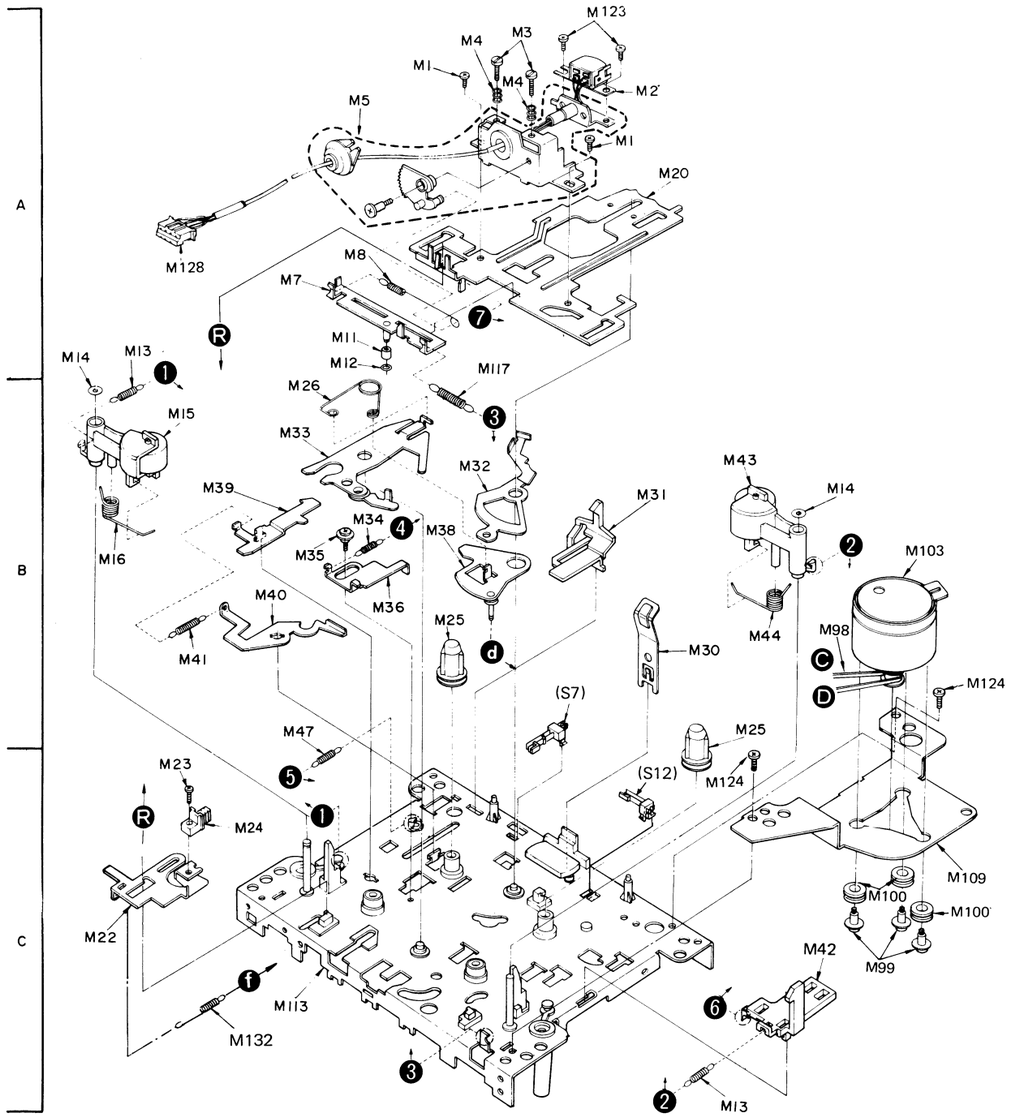


SCHEMATIC DIAGRAM



MECHANISM PARTS LOCATION

(Top View)



| | | |

Specifications

Playback torque	25~60g · cm
Fast Forward torque	75~135g · cm
Rewind torque	75~135g · cm
Pressure of pressure roller	220~330g
Wow and flutter	Less than 0.2% (WRMS)

Screw Dimensions Quick Reference

• Dimensions

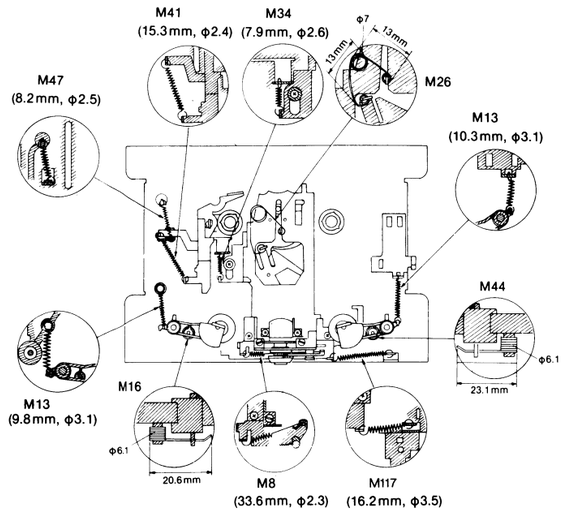
XSN 3 + 10 = Pan head machine screw, 3mm in diameter, 10mm long.

Type/Diameter/Length

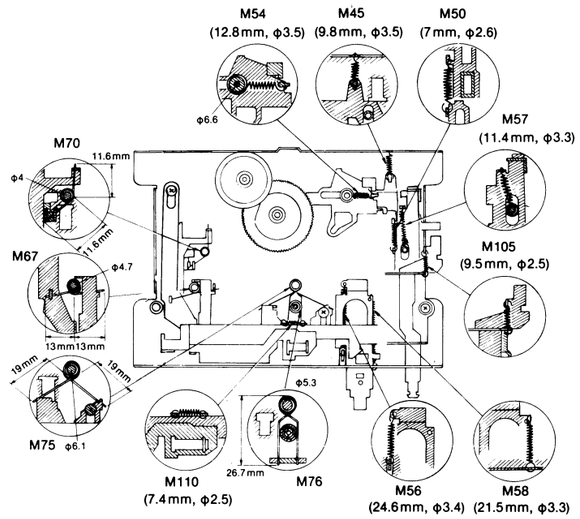
• Types

Precision machine screw	Machine screw	Tapping/Tap-tight machine screw
XQC Flat head	XSB Binding head	XTB Binding head
XQG Oval fillister head	XSC Oval countersunk head	XTC Oval countersunk head
XQH Flat fillister head	XSH Flat fillister head	XTN Pan head
XQS Flat head	XSN Pan head	XTS Flat head
	XSS Flat head	

■ **SPRING LOCATION (Top View)**

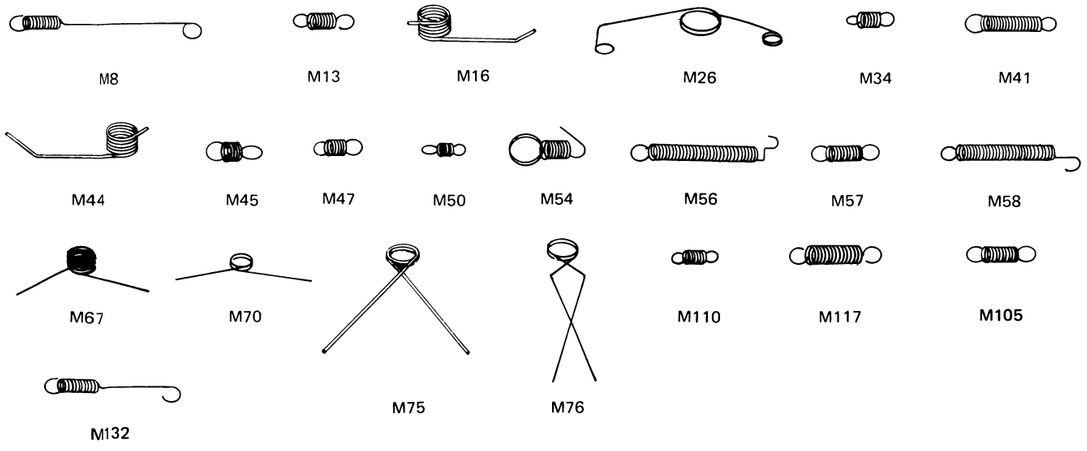


■ **SPRING LOCATION (Rear View)**

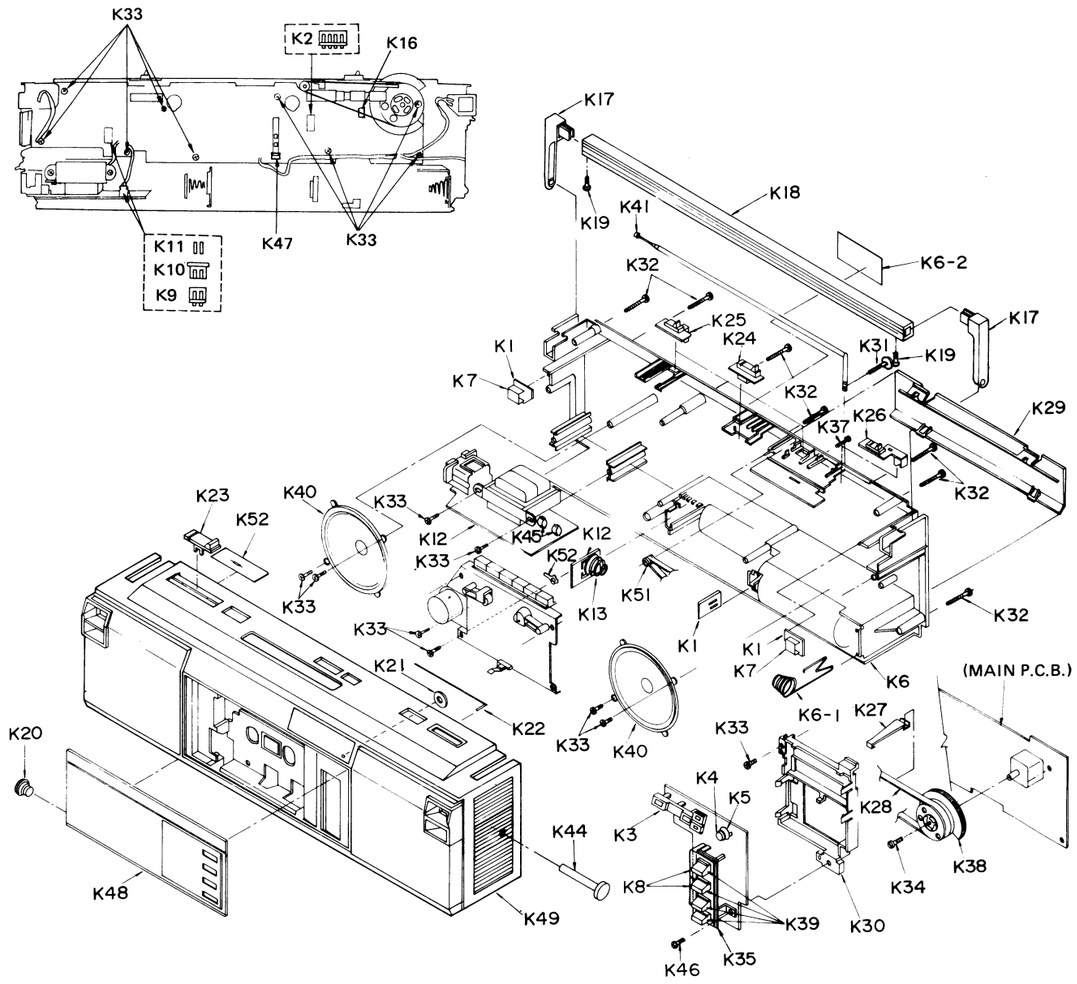


■ **SPRING ILLUSTRATION**

The spring illustration used shows the actual size so it can be used to check the shape of the spring.
(The illustration shows the spring separated from the mechanism.)



CABINET PARTS LOCATION



D

■ RESISTORS & CAPACITORS

Numbering System of Resistor

Example:

ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value (100Ω)

ERJ	6G	C	J	2R2
Type	Wattage	Shape	Tolerance	Value (2.2Ω)

Numbering System of Capacitor

Example:

ECKD	1H	102	Z	F
Type	Voltage	Value (1000pF)	Tolerance	Peculiarity

ECEA	50	M	R47
Type	Voltage	Peculiarity	Value (0.47μF)

Resistor Type		Wattage	Tolerance
ERD:	Carbon Resistor	10 : 1/8W	F : ±1%
ERC:	Solid Resistor	25 : 1/4W	G : ±2%
ERF:	Incombustible Box-Shaped Wire-Wound Resistor	50 : 1/2W 18 : 1/8W 14 : 1/4W 12 : 1/2W	J : ±5% K : ±10% H : ±20%
ERG:	Metal Oxide-Film Resistor	1 : 1W 2 : 2W	
ERM:	Wire-Wound Resistor	3 : 3W S1 : 1/2W	
ERO:	Superstable Metal Film Resistor	S2 : 1/4W 6G : 1/10W 8G : 1/8W	
ERX:	Metal-Film Resistor		
RRJ: ERJ:	Chip Resistor		

Capacitor Type		Voltage				Tolerance
ECCD:	Ceramic Capacitor (Chitacon)	(ECCD, ECKD Type) 1H : 50V DC	2H : 500V DC			K : ±10% M : ±20%
ECKD:	Ceramic Capacitor (Chitabari)	(ECFD Type) C : 12V DC	D : 25V DC			Z : +80% −20%
ECFD:	Semiconductor Ceramic Capacitor	E : 50V DC (ECQ Type)				J : ±5% G : ±2%
ECE□:	Electrolytic Capacitor	05 : 50WV DC	1 : 100WV DC			F : ±1%
ECS□:	Tantalum Fixed Electrolytic Capacitor	(ECE, ECS Type) 0G : 4V	0J : 6.3V			C : ±0.25pF D : ±0.5pF
ECQ□:	Polystyrenc Film Capacitor	1A : 10V	1C : 16V			F : ±1pF
ECQS:	Polystyrene Film Capacitor	1E : 25V	1V : 35V			
ECQS:	Polypropylene Film Capacitor	1H : 50V	1J : 63V			
ECQV:	T.F Capacitor	2A : 100V				
ECU□: RCU□:	Chip Capacitor					
ECBT:	Cylindrical Ceramic Capacitor					

※ Capacity are in microtarads (μF) unless specified otherwise, P=Pico-farads.
※ Resistance are in ohms (Ω), unless specified otherwise, 1K=1,000Ω, 1M=1,000KΩ

Ref. No.	Part No.	Part Code
CAPACITORS		
C1	ECCT1H120KC	
C2	ECCT1H270KC	
C3	ECCD1H470KC	
C4	ECKD1H103ZF	
C5	ECCT1H120KC	
C6	ECCT1H180KC	
C7	ECCD1H220KC	
C8	ECKD1H103ZF	
C9	ECKF1H102KB	
C10	ECCD1H050CC	
C11	ECCT1H180KC	
C12	ECKF1H102KB	
C13	ECCT1H070DC	
C14	ECQP2A221JZ	
C15	ECQP2A361JZ	
C16	ECQP2A392JZ	
C17	ECCD1H470KC	
C18	ECKT1H331KB	
C19	ECKD1H471KB	
C20	ECKT1H331KB	
C21	ECCT1H150KC	
C22	ECKF1H102KB	
C23	ECFT1E223MD	
C24	ECCT1H121K	
C25	ECFDD473KXY	
C26	ECCT1H560KC	
C28	ECFDD473KXY	
C29	ECCD1H470KC	
C30	ECEA1AU101	
C31	ECEA1CU100	
C32	ECFD1E223MD	
C33	ECFD1E333MD	
C34	ECEA1HU0R1	
C35	ECEA1CSZ102	
C36	ECKD1H471KB	
C37	ECEA1HU010	
C38	ECFDD473KXY	
C39	ECFV1E153MD	
C40	ECQP2A102JZT	
C41	ECKF1H102KB	
C42	ECEA1HU0R1	
C43	ECEA1HU010	
C45, C46	ECFV1E153MD	
C47, C48	ECEA1HU010	
C51	ECQP2A141JZT	
C52	ECFD1E333MD	
C100	ECKT1H682MD	
C101	ECFVD104MD	
C102	ECFV1E153MD	
C103	ECKT1H152MD	
C104	ECFT1E472MDY	
C105	ECEA1HU010	
C106	ECKD1H471KB	
C107	ECEA1AU101	
C108	ECEA1HU010	
C109	ECFV1E153MD	
C110, C111	ECEA1HU010	
C113	ECEA1HKR33	
C114	ECEA1AU101	
C115	ECEA1AU470	
C116	ECKT1H102MD	
C117	ECEA0JU471E	
C118	ECFVD104MD	
C120	ECFDD473KXY	
C122, C123	ECEA1HU010	
C124	ECFDD473KXY	
C125	ECKV1H222MD	
C126	ECFT1E103MD	
C127	ECFD1E333MD	
C150	ECEA1HU010	
C153	ECFVD104MD	
C200	ECKT1H682MD	
C203	ECKT1H152MD	
C204	ECFT1E472MDY	
C205	ECEA1HU010	
C206	ECKD1H471KB	
C207	ECEA1AU101	
C208	ECEA1HU010	
C209	ECFV1E153MD	
C210, C211	ECEA1HU010	
C213	ECEA1HKR33	
C214	ECEA1AU101	
C215	ECEA1AU470	
C216	ECKT1H102MD	
C217	ECEA0JU471E	
C218	ECFVD104MD	
C220	ECFDD473KXY	
C222, C223	ECEA1HU010	
C224	ECFDD473KXY	
C225	ECKV1H222MD	
C226	ECFT1E103MD	
C227	ECFD1E333MD	
C250	ECEA1HU010	
C253	ECFVD104MD	
C301	ECKD1H103ZF	
C302	ECEA1AU101	
C303	ECEA1CU330	
C304	ECEA1CSZ102	
C305	ECFV1E153MD	
C306	ECFT1E103MD	
C307	ECEA1HUR47B	
C309, C310	ECKF1H102KB	
C311	ECKD1H103ZF	
C312	ECEA1CSZ102	
C313	ECEA1CS222	
C314, C315	ECEA1AU101	
C316	ECEA1CU471E	
C317	ECEA1HUR470B(Main P.C.B.)	
C317, C318	ECKW1H103MD(Power Supply P.C.B.)	
C319, C320	ECKW1H103MD(Power Supply P.C.B.)	
C321	ECEA1AU101	
C322	ECQS2B272KZ	
C324	ECFT1E562MDY	
C325	ECKF1H102KB	
C330, C331	ECCT1H121K	
C332	ECFDD473KXY	
C333	ECKT1H561KB	
C334	ECCT1H181K	
C340,C341	ECKD1H103ZF	
C350	ECEA1CU471E	
C351	ECCT1H100KC	
C352	ECEA1HU010	
RESISTORS		
R1	ERD25TJ101	
R2	ERD25TJ221	
R3	ERD25TJ474	
R4	ERD25FJ100	
R10	ERD25TJ471	
R11	ERD25TJ101	
R13	ERD25FJ102	
R15	ERD25TJ101	
R16	ERD25TJ222	
R17	ERD25TJ473	
R18	ERD25TJ332	
R20	ERD25TJ682	
R24	ERD25TJ681	
R28, R29	ERD25FJ472	
R36, R100	ERD25FJ102	
R101	ERD25TJ332	
R102	ERD25TJ682	
R103	ERD25FJ472	
R104	ERD25TJ103	
R105	ERD25TJ682	
R106	ERD25TJ823	
R107	ERD25TJ470	
R108	ERD25TJ822	
R109	ERD25TJ103	
R110	ERD25TJ123	
R111	ERD25TJ221	
R112	ERD25TJ224	
R113	ERD25TJ181	
R114	ERD25FJ1R0	
R115	ERD25TJ101	
R116	ERD25TJ154	
R117, R118	ERD25TJ333	
R119	ERD25TJ332	
R120	ERD25TJ471	
R121	ERD25TJ223	
R122	ERD25TJ562	
R123	ERD25TJ332	
R124	ERD25TJ182	
R125	ERD25TJ184	
R126	ERD25TJ155	
R202	ERD25TJ682	
R203	ERD25FJ472	
R204	ERD25TJ103	
R205	ERD25TJ682	
R206	ERD25TJ823	
R207	ERD25TJ470	
R208	ERD25TJ822	
R209	ERD25TJ103	
R210	ERD25TJ123	
R211	ERD25TJ221	
R212	ERD25TJ224	
R213	ERD25TJ181	
R214	ERD25FJ1R0	
R215	ERD25TJ101	
R216	ERD25TJ154	
R217, R218	ERD25TJ333	
R219	ERD25TJ332	
R220	ERD25TJ471	
R221	ERD25TJ223	
R222	ERD25TJ562	
R223	ERD25TJ332	
R224	ERD25TJ182	
R225	ERD25TJ184	
R226	ERD25TJ155	
R302	ERD25TJ332	
R303	ERD25TJ105	
R305	ERD25TJ680	
R307	ERD25TJ821	
R308	ERD25TJ220	
R309	ERD25TJ121	
R310	ERD25TJ681	
R311	ERD25TJ473	
R312, R313	ERD25TJ471	
R315	ERD25TJ391	
R316	ERD25TJ151	
R333, R334	ERD25TJ222	
R335	ERD25TJ331	
R336	ERD25TJ104	
R337	ERD25TJ101	
R338	ERD25TJ6R8	
R339	ERD25TJ223	
R340	ERD25TJ102	

■ REPLACEMENT PARTS LIST

Notes:

1. Important safety notice
   Components identified by ⚠ mark have special characteristics important for safety.
   When replacing any of these components, use only manufacture's specified parts.
2. Ⓜ mark stands for that the parts are supplied in MESA.

Ref. No.	Part No.	Part Code	Description
INTEGLATED CIRCUITS			
IC1	AN7205	IC	
IC2	AN7220A	IC	
IC3	RVIBA1332L	IC	
IC4	AN7310	IC	
IC5	RVIBA6433	IC	
IC6	RVIBA5406	IC	
TRANSISTORS			
Q1	2SC1675K1	TRANSISTOR.	
Q101	2SA733P	TRANSISTOR	
Q111	2SC1328-S	TRANSISTOR.	
Q151	2SC945Q	TRANSISTOR.	
Q201	2SA733P	TRANSISTOR	
Q211	2SC1328-S	TRANSISTOR.	
Q251	2SC945Q	TRANSISTOR.	
Q301	2SC2001L1	TRANSISTOR.	
Q311	2SC945Q	TRANSISTOR.	
Q325	2SC1685-Q	TRANSISTOR.	
Q333, Q334	2SC945Q	TRANSISTOR.	
DIODES			
D1, D3	RVD1N4148	DIODE.	
D4	RVDRD5R1EB1	DIODE.	
D10	LN213RP	DIODE.	
D11, D12	SVGLB74UR3HL	DIODE, SI, LED	Ⓜ
D13	LN213RP	DIODE.	
D101, D151	RVD1N4148	DIODE.	
D201, D251	RVD1N4148	DIODE.	
D303, D304	RVD1SR35	DIODE	
D305, D306	RVD1SR35	DIODE	
D307	RVDRD6R8EB1T	DIODE, SI	
D333	RVD1N4148	DIODE.	
COILS			
L1, L2	RLQY30S1	CHOKE COIL	
L5	RL04N184	OSCILLATOR COIL, FM OSC	
L6, L7	RLF6W7-M	BARANTENNA, LM/MW	Ⓜ
L8	RLA3B41	COIL, SW ANT	
L9	RL01B12	COIL, LW OSC	
L10	RL02B108	OSCILLATOR COIL, MW OSC	
L11	RL03B90	OSCILLATOR COIL, SW OSC	
L15, L16	RL04Y84W	COIL	Ⓜ
L303	RL09B17	OSCILLATOR COIL, BIAS	

Ref. No.	Part No.	Part Code	Description
TRANSFORMERS			
T1, T2	RLI4B153		I.F.T. FM
T3	RLI2B153		I.F.TRANSFORMER, AM
T101 (Z, F)	⚠ RLT5K3E2A		POWER TRANSFORMER Ⓜ
T101 (E)	⚠ RLT5K3G3A		POWER TRANSFORMER Ⓜ
VARIABLE CAPACITORS			
VC1	RCV4RC2RA		VARIABLE CAPACITOR, FM ANT
TRIMMER CAPACITORS			
CT3, CT5	RCVTZ20F		TRIMMER CAPACITOR, LW ANT
CT7	RCVTZ20F		TRIMMER CAPACITOR, LW ANT
VC5	RCVRH7UC16		VARIABLE RESISTOR, FINE
VARIABLE RESISTORS			
VR2 (Z)	EWASE3VABA54		VARIABLE RESISTOR Ⓜ
VR3	EVNM4AA00B14		TRIMMER CAPACITOR, FINE
FILTERS			
CF1	RVFSFE107MAZ		CERAMIC FILTER, 10.7MHZ
CF2 (E)	QCRZZ470A7W		CERAMIC FILTER, 470KHZ
CF2 (Z, F)	RVFSFZ455A		CERAMIC FILTER, 455KHZ
COMPONENTS COMBINATION			
Z1	RXABPMB6A		COMPONENT COMBINATIONS
SWITCHES			
S1	RSH2G03ZA-A		PUSH SWITCH Ⓜ
S2	RSS3F06Y		SLIDE SWITCH, FUNCTION Ⓜ
S3	RFA67Z		LEAF SWITCH, MOTOR
S5	ESB6483		PUSH SWITCH Ⓜ
S6	RSS3B31Z		SWITCH, FM MODE
S7	RFA67Z		LEAF SWITCH, MOTOR
S8, S9	ESB6483		PUSH SWITCH Ⓜ
S10	ESB6483		PUSH SWITCH Ⓜ
S11	RSS3F06Y		SLIDE SWITCH, AM BAND Ⓜ
S12	RFA67Z		LEAF SWITCH, MOTOR
JACKS			
J1	⚠ RJJ1A4ZD		JACK, AC IN/S4
J2	RJJ1D27Z		JACK, HEADPHONES
FUSES			
F1	⚠ XBA2C10TB0		FUSE Ⓜ

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■ REPLACEMENT PARTS LIST

Notes:

1. Important safety notice.
   Components identified by ⚠ mark have special characterisics important for safety.
   When replacing any of these components, use only manufactur's specified parts.
2. The letter in the square bracket bottom the Ref. No. indicates the shipping destination.
   [Z] ... For All European areas except [E] and [F], [E].... For United Kingdom, [F].... For France.
3. The letter in circles in the Ref. No. column indicates the color of the product.
   Ⓚ .... Black Type, Ⓦ .... White Type, Ⓡ .... Red Type.
4. The letter in the equare bracket after the part name indicates the color of the part.
   [K] .... Black, [W] .... White, [R].... Red, [H].... Gray, [S].... Silver.
5. [M] mark stands for that the parts are supplied in MESA.

Ref. No.			Part No.	Part Code	Description
CABINET PARTS					
K1			RUP2222ZA		PC.BOARD W/COMPONENT [M]
K2			RJP4G10Z		PLUG(4P), CP1
K3			RME414ZA		ANGLE, LED [M]
K4			RJM166Z		CONDENSER MICROPHONE
K5			RME432ZA		ANGLE, MIC [M]
K6 [E]	Ⓚ	⚠	RYFXFM27LZEK		REAR CABINET (K) ASS'Y [M]
K6 [E]	Ⓡ	⚠	RYFXFM27LZE2		REAR CABINET (R) ASS'Y [M]
K6 [E]	Ⓦ	⚠	RYFXFM27LZE7		REAR CABINET (H) ASS'Y
K6 [F]	Ⓚ		RYFXFM27LZFS		REAR CABINET (K) ASS'Y [M]
K6 [F]	Ⓡ		RYFXFM27LZF2		REAR CABINET (R) ASS'Y [M]
K6 [F]	Ⓦ		RYFXFM27LZF7		REAR CABINET (H) ASS'Y [M]
K6 [Z]	Ⓚ		RYFXFM27LZKS		REAR CABINET (K) ASS'Y [M]
K6 [Z]	Ⓡ		RYFXFM27LZK2		REAR CABINET (R) ASS'Y [M]
K6 [Z]	Ⓦ		RYFXFM27LZK7		REAR CABINET (H) ASS'Y [M]
K6-1			RJC91003Z		BATTERY TERMINAL, (+/-) [M]
K6-2 [E]			RGT1245YA		NAME PLATE [M]
K7			RWEXFM27LZKS		SPEAKER, TWEETER [M]
K8			SJT30543-V		PLUG, CS3,4 [M]
K9			RJP2G4Y		PLUG, CP2, 5
K10			RJS2L3Z		SOCKET, CS2, 5
K11			RJT707Z		TERMINAL, CONTACT
K12			RUP2142ZA		PC.BOARD W/COMPONENT, P.SU[M]
K13			RJC610Z		BATTERY SPRING, (-)
K16			RJT865Z		TERMINAL, ANTENNA
K17	Ⓚ		RKX347Z		ARM, HANDLE (K) [M]
K17	Ⓡ		RKX347ZA2		ARM, HANDLE (R) [M]
K17	Ⓦ		RKX347ZA8		ARM, HANDLE(W) [M]
K18	Ⓚ		RKX365ZA		HANDLE (K) [M]
K18	Ⓦ		RKX365ZA1		HANDLE (W) [M]
K18	Ⓡ		RKX365ZA2		HANDLE (R) [M]
K19			XTC3+8CFZ		TAPPING SCREW
K20			RDG5782Y		GEAR, EJECT [M]
K21			RHG720W		MIC RUBBER [M]
K22			RUS528Y		COIL SPRING, EJECT
K23			RBC992ZB		BUTTON, VOLEUM (S) [M]
K24			RBC990ZA		BUTTON (S)
K25			RBD371ZB3		KNOB, FUNCTION[H] [M]
K26			RBD372ZA2		KNOB, FM/MODE(H) [M]
K27			RDP326ZA		POINTER, DIAL (W) [M]
K28			RDV40Z		DIAL BELT [M]
K29	Ⓡ		RKK318ZA2		BATTERY COVER (R) [M]
K29	Ⓚ		RKK318ZB		BATTERY COVER (K)
K29	Ⓦ		RKK318ZB-7		BATTERY COVER (H) [M]
K30			RUA721ZA		CHASSIS, EQ. [M]
K31			XYN3+F25FN		SCREW [M]
K32			XTN3+35G		TAPPING SCREW
K33			XTV3+12G		SCREW
K34			XSN26+8		SCREW
K35	Ⓚ		RME431ZB		ANGLE, EQ.SW(K) [M]
K35	Ⓦ		RME431ZB1		ANGLE, EQ.SW(W) [M]
K35	Ⓡ		RME431ZB2		ANGLE, EQ.SW(R) [M]
K37			XTW2+8S		SCREW
K38			RBN733ZC-5		KNOB, TUING (S) [M]
K39			RBC991YA		BUTTON, EQ (S) [M]
K40			RAS10P22ZAD1		SPEAKER, WOOFER [M]
K41			XEARR225EAY		TELESCOPIC ANTENNA
K44	Ⓚ		RBN762ZA		KNOB, FINE(K) [M]
K44	Ⓦ		RBN762ZA1		KNOB, FINE(W) [M]
K44	Ⓡ		RBN762ZA2		KNOB, FINE(R) [M]
K45		⚠	QTF1054		FUSE HOLDER
K46			XTV3+14G		TAPPING SCREW
K47			RME1SZA		PIECE,SWITCH
K48			RYQXFM27MKSN		CASSETTE LID ASS'Y [M]
K49 [E]	Ⓚ	⚠	RYMXFM27LZES		FRONT CABINET ASS'Y (K) [M]
K49 [E]	Ⓡ	⚠	RYMXFM27LZE2		FRONT CABINET (R) ASS'Y [M]
K49 [E]	Ⓦ	⚠	RYMXFM27LZE8		FRONT CABINET (W) ASS'Y [M]
K49 [Z, F]	Ⓚ		RYMXFM27LZKS		FRONT CABINET (K) ASS'Y [M]
K49 [Z, F]	Ⓡ		RYMXFM27LZK2		FRONT CABINET (R) ASS'Y [M]
K49 [Z, F]	Ⓦ		RYMXFM27LZK8		FRONT CABINET (W) ASS'Y [M]
K51			RDR72Z		PULLEY, DIAL [M]
K52			RHS634ZA		FELT, VOLUME [M]
ACCESORIES					
A1 [Z, F]		⚠	RJA20Z		AC CORD, AC
A1 [E]		⚠	RJA43Z		POWER CORD(CAUTION LABEL)
A2			RQX4912ZA		OPERATING INSTRUCTIONS [M]
PACKINGS					
P2			RPK24052ZA		GIFT BOX [M]
P3			RPN9538ZA		PAD COMPLETE [M]

D

■ REPLACEMENT PARTS LIST

Notes:

1. The letter in the square bracket after the part name indecates the color of the part.
   [S].... Silver , [K].... Black
2. [M] mark stands for the parts are supplied in MESA.

Ref. No.	Part No.	Part Code	Description
MECHANICAL PARTS			
M1	XSN2+3		SCREW
M2	RJH4C29GZ		HEAD, R/P
M3	RFE263Z		SCREW
M4	RFS597Z		SPRING, AZIMUTH
M5	RFU84Z		HAED FRAME ASS'Y
M6	RFK19Z		FF IDLER ASSY
M7	RFY654Z		SLIDE PLATE ASSY
M8	RFS598Z		SPRING, S.PLATE
M11	RFX139Z		SPACER(C)
M12	RFN160Z		WASHER
M13	RFS599Z		SPRING, P.ROLLER
M14	RFN110Z		WASHER
M15	RFR37Z		PINCH ROLLER, REVERSE ASS'Y
M16	RFS600Z		SPRING
M17	RFE267Z		SCREW
M18	RFY655Z		ARM, DR
M19	RFD255Z		ANGLE, DR ARM
M20	RFU85Z		HEAD BASE, RP
M22	RFD285ZA		HEAD BASE, ERASE
M23	XSN17+5		SCREW
M24	RJHIC03XZCG		HEAD, ERASE
M25	RFE257Z		REEL TABLE
M26	RFS601Z		SPRING, REVERSE
M30	RFS645Z		SPRING, C.T.HOLDER
M31	RFY656Z		LOCK, E.SAFETY [K]
M32	RFD257Z		REVERSE PLATE(A)
M33	RFY657Z		REVERSE(A)LEVER ASSY
M34	RFS603Z		SPRING, S.PLATE
M35	RFE265Z		SCREW
M36	RFD258Z		STOPPER PLATE
M38	RFD259Z		IDLER PLATE ASS'Y
M39	RFD260Z		LEVER, R.INHIBIT
M40	RFD261Z		LEVER, M0
M41	RFS604Z		SPRING, M0 LEVER
M42	RFY658Z		LEVER, LATCH(B) [K]
M43	RFR38Z		PINCH ROLLER, FOWARD ASS'Y
M44	RFS605Z		SPRING
M45	RFS606Z		SPRING
M46	RFY659Z		LEVER, DR
M47	RFS607Z		SPRING
M48	RFD262Z		MODE PLATE
M49	RFY660Z		MODE LEVER, REVERSE
M50	RFS608Z		SPRING
M51	RFY661Z		LEVER, DETCTION
M52	RFE259Z		ROD, DETECTION
M53	RFE260Z		BUSH, DET.ROD
M54	RFS609Z		SPRING, DET.ROD
M55	RFY705Z		LEVER, REVERSE
M56	RFS610Z		SPRING, HEAD BASE
M57	RFS611Z		SPRING, REC LEVER
M58	RFS612Z		SPRING, PB LEVER
M59	RFD264Z		SWITCH PLATE
M60	RZL1XFM27MKS		LEVER ASS'Y, RECORD [S] [M]
M61	RZL2XFM27MKS		LEVER ASS'Y, PLAYBACK[S] [M]
M62	RZL3XFM27MKS		LEVER ASS'Y, REWIND [S] [M]
M63	RZL4XFM27MKS		LEVER ASS'Y, F.F. [S] [M]
M64	RZL5XFM27MKS		LEVER ASS'YEJECT/STOP [S] [M]
M65	RZL6XFM27MKS		LEVER, PAUSE [M]
M66	RFE261Z		SCREW
M67	RFS613Z		SPRING
M68	RFY669Z		LEVER, CUE
M69	RFY670Z		PAUSE LOCK ARM
M70	RFS622Z		SPRING
M71	RFX142Z		STOPPER, CLUTH
M72	RFD265Z		PLATE, DET.INHI
M74	RFY671Z		PAUSE ARM
M75	RFS615Z		SPRING
M76	RFS616Z		SPRING
M77	RFG90Z		IDLER GEAR
M78	RFN162Z		WASHER
M79	RFD263Z		FF IDLER PLATE ASSY
M80	RFY672Z		LEVER, DET.INHI
M81	RFJ58Z		REEL TABLE(L) ASSY
M82	RFJ59Z		REEL TABLE (R) ASSY
M87	RFQ44Z		PULLER, DRIVE
M88	RFN163Z		WASHER
M89	RFN164Z		WASHER
M90	RFS619Z		SPRING, FLYWHEEL(R)
M91	RFS620Z		SPRING, FLYWHEEL(L)
M92	RFF41Z		FLYWHEEL(R) ASS'Y
M93	RFF42Z		FLYWHEEL(L) ASS'Y
M94	RFE258Z		METAL
M95	RFN116Z		WASHER
M96	RFB69Z		BELT, D.PULLEY
M97	RFQ45Z		TENSION PULLEY ASS'Y
M98	RFB70Z		BELT, MOTOR
M99	RFE142Z		SCREW
M100	RFI24Z		RUBBER CUSHION
M101	RFE298Z		FLYWHEEL BRACKET
M103	RFM93ZA		MOTOR ASS'Y
M104	RFE268Z		SCREW
M105	RFS621Z		SPRING, DIRE.PLATE
M106	RFD266Z		PLATE, DIRECTION
M107	RFY673Z		ROD, SLIDE(B)
M108	RFY674Z		ROD, SLIDE(A)
M109	RFD286ZA		ANGLE, MOTOR
M110	RFS617Z		SPRING, S.ROD(A)
M111	RFD267Z		SWITCH PLATE(B)
M112	RFD268Z		BUTTON PLATE HOLDER
M113	RFU86YA		MECHANISM BASE ASS'Y
M115	RFG91Z		FLYWHEEL GEAR
M116	RFX143Z		WASHER
M117	RFS618Z		SPRING, S.PLATE
M120	RFY675Z		PLATE, REV.MODE
M121	RFE269Z		SCREW
M122	RFD272Z		SWITCH PLATE(D)
M123	RFE318ZA		SCREW
M124	RFE319Z		SCREW
M125	RUS696ZA		SPRING R/P LEVER [M]
M126	XTN2+5F		SCREW
M127	RBC989ZA-0		BUTTON [M]
M128	RZWXFM27MKSN		WIRING MATERIAL [M]
M131	RME27YA		ANGLE, SW [M]
M132	RFS646Z		SPRING, ERASE